

JosÃ© Ángel Acosta

List of Publications by Year in descending order

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79
papers

1,463
citations

516710

16
h-index

395702

33
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80
all docs

80
docs citations

80
times ranked

920
citing authors

#	ARTICLE	IF	CITATIONS
1	Interconnection and damping assignment passivity-based control of mechanical systems with underactuation degree one. IEEE Transactions on Automatic Control, 2005, 50, 1936-1955.	5.7	264
2	Control of a multirotor outdoor aerial manipulator. , 2014, , .		136
3	Total Energy Shaping Control of Mechanical Systems: Simplifying the Matching Equations Via Coordinate Changes. IEEE Transactions on Automatic Control, 2007, 52, 1093-1099.	5.7	100
4	Stability of active disturbance rejection control for uncertain systems: A Lyapunov perspective. International Journal of Robust and Nonlinear Control, 2017, 27, 4541-4553.	3.7	64
5	A constructive solution for stabilization via immersion and invariance: The cart and pendulum system. Automatica, 2008, 44, 2352-2357.	5.0	63
6	Constructive immersion and invariance stabilization for a class of underactuated mechanical systems. Automatica, 2013, 49, 1442-1448.	5.0	59
7	A new swing-up law for the Furuta pendulum. International Journal of Control, 2003, 76, 836-844.	1.9	50
8	Furuta's Pendulum: A Conservative Nonlinear Model for Theory and Practise. Mathematical Problems in Engineering, 2010, 2010, 1-29.	1.1	47
9	Design of the High-Payload Flapping Wing Robot E-Flap. IEEE Robotics and Automation Letters, 2021, 6, 3097-3104.	5.1	43
10	Adaptive Control for Aircraft Longitudinal Dynamics with Thrust Saturation. Journal of Guidance, Control, and Dynamics, 2015, 38, 651-661.	2.8	38
11	Robust control of underactuated Aerial Manipulators via IDA-PBC. , 2014, , .		37
12	PI-Type Controllers and $\hat{\tau}$ Modulation for Saturated DC-DC Buck Power Converters. IEEE Access, 2021, 9, 20346-20357.	4.2	37
13	Control of the longitudinal flight dynamics of an UAV using adaptive backstepping. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 1892-1897.	0.4	35
14	A nonlinear hybrid controller for swinging-up and stabilizing the Furuta pendulum. Control Engineering Practice, 2013, 21, 989-993.	5.5	33
15	STABILIZATION OF OSCILLATIONS IN THE INVERTED PENDULUM. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 79-84.	0.4	26
16	Non-linear sliding mode surfaces for a class of underactuated mechanical systems. IET Control Theory and Applications, 2010, 4, 2195-2204.	2.1	25
17	Cooperative Aerial Manipulation with Decentralized Adaptive Force-Consensus Control. Journal of Intelligent and Robotic Systems: Theory and Applications, 2020, 97, 171-183.	3.4	23
18	Accurate control of Aerial Manipulators outdoors. A reliable and self-coordinated nonlinear approach. Aerospace Science and Technology, 2020, 99, 105731.	4.8	21

#	ARTICLE	IF	CITATIONS
19	Constructive feedback linearization of underactuated mechanical systems with 2-DOF. , 0, , .		18
20	Integral action in first-order Closed-Loop Inverse Kinematics. Application to aerial manipulators. , 2015, , .		16
21	Diffeomorphism-based control of nonlinear systems subject to state constraints with actual applications. , 2014, , .		14
22	Cooperative Aerial Load Transport with Force Control. IFAC-PapersOnLine, 2018, 51, 38-43.	0.9	14
23	A Bio-Inspired Manipulator with Claw Prototype for Winged Aerial Robots: Benchmark for Design and Control. Applied Sciences (Switzerland), 2020, 10, 6516.	2.5	13
24	Adaptive Nonlinear Control For Perching of a Bioinspired Ornithopter. , 2020, , .		13
25	Aerodynamic reduced-order Volterra model of an ornithopter under high-amplitude flapping. Aerospace Science and Technology, 2022, 121, 107331.	4.8	13
26	On the PDEs arising in IDA-PBC. , 2009, , .		12
27	A robust decentralised strategy for multi-task control of unmanned aerial systems. Application on underactuated aerial manipulator. , 2016, , .		12
28	Estimation and control of oscillators through short-range noisy proximity measurements. Automatica, 2020, 113, 108752.	5.0	12
29	A benchmark mechatronics platform to assess the inspection around pipes with variable pitch quadrotor for industrial sites. Mechatronics, 2021, 79, 102641.	3.3	12
30	Control Aware of Limitations of Manipulators With Claw for Aerial Robots Imitating Bird's Skeleton. IEEE Robotics and Automation Letters, 2021, 6, 6426-6433.	5.1	11
31	Quaternion-based state-dependent differential Riccati equation for quadrotor drones: Regulation control problem in aerobatic flight. Robotica, 2022, 40, 3120-3135.	1.9	11
32	Why fly blind? Event-based visual guidance for ornithopter robot flight. , 2021, , .		10
33	Design and comparison of tails for bird-scale flapping-wing robots. , 2021, , .		10
34	A PD-Type State-Dependent Riccati Equation With Iterative Learning Augmentation for Mechanical Systems. IEEE/CAA Journal of Automatica Sinica, 2022, 9, 1499-1511.	13.1	10
35	Singular Perturbation Control of the Lateral-Directional Flight Dynamics of an UAV. IFAC-PapersOnLine, 2015, 48, 120-125.	0.9	9
36	Geometric control using the state-dependent Riccati equation: application to aerial-acrobatic maneuvers. International Journal of Control, 2022, 95, 1875-1887.	1.9	9

#	ARTICLE	IF	CITATIONS
37	Installation of Clip-Type Bird Flight Diverters on High-Voltage Power Lines with Aerial Manipulation Robot: Prototype and Testbed Experimentation. Applied Sciences (Switzerland), 2021, 11, 7427.	2.5	9
38	Passivation of underactuated systems with physical damping. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 955-960.	0.4	8
39	Adaptive output-feedback stabilisation of an uncertain second-order linear systems. International Journal of Adaptive Control and Signal Processing, 2017, 31, 823-832.	4.1	8
40	Stabilisation of state-constrained nonlinear systems via diffeomorphisms: A Sontag's formula approach with an actual application. International Journal of Robust and Nonlinear Control, 2018, 28, 4032-4044.	3.7	7
41	Optimized Thrust Allocation of Variable-pitch Propellers Quadrotor Control: A Comparative Study on Flip Maneuver. , 2019, , .		7
42	Nonlinear state-constrained control. Application to the dynamic positioning of ships. , 2014, , .		6
43	Adaptive Integral Inverse Kinematics Control for Lightweight Compliant Manipulators. IEEE Robotics and Automation Letters, 2020, 5, 3468-3474.	5.1	6
44	Swinging up the Furuta pendulum by the speed gradient method. , 2001, , .		5
45	Kinetic energy shaping in the inverted pendulum. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 1063-1067.	0.4	5
46	Constructive feedback linearization of mechanical systems with friction and underactuation degree one. , 2007, , .		5
47	A 79.7g Manipulator Prototype for E-Flap Robot: A Plucking-Leaf Application. IEEE Access, 2022, 10, 65300-65308.	4.2	5
48	A new strict Lyapunov function for fully-actuated mechanical systems controlled by IDA-PBC. , 2009, , .		4
49	Output-feedback control of the longitudinal flight dynamics using adaptative backstepping. , 2011, , .		4
50	Force Control in Cooperative Aerial Manipulation. , 2018, , .		4
51	Gravity compensation and optimal control of actuated multibody system dynamics. IET Control Theory and Applications, 2022, 16, 79-93.	2.1	4
52	Fully Coupled Six-DoF Nonlinear Suboptimal Control of a Quadrotor: Application to Variable-Pitch Rotor Design. Advances in Intelligent Systems and Computing, 2020, , 72-83.	0.6	4
53	A New SG Law for Swinging the Furuta Pendulum Up. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 795-800.	0.4	3
54	Position-feedback stabilization of mechanical systems with underactuation degree one. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 985-990.	0.4	3

#	ARTICLE	IF	CITATIONS
55	Linealización por realimentación constructiva de sistemas mecánicos con grado de subactuación 1 inestables con fricción. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2007, 4, 70-79.	1.0	3
56	A controller for swinging-up and stabilizing the inverted pendulum. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 7695-7699.	0.4	3
57	Constructive Immersion and Invariance Stabilization for a Class of Underactuated Mechanical Systems *. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 108-113.	0.4	3
58	On Singular Perturbations of Flexible and Variable-Speed Wind Turbines. International Journal of Aerospace Engineering, 2012, 2012, 1-12.	0.9	3
59	Collision Avoidance of SDRE Controller using Artificial Potential Field Method: Application to Aerial Robotics. , 2020, , .		3
60	An algebraic version of the active disturbance rejection control for second-order flat systems. International Journal of Control, 2021, 94, 215-222.	1.9	3
61	Soft-Landing of Multi-Rotor Drones using a Robust Nonlinear Control and Wind Modeling. , 2021, , .		3
62	Explicit Aerodynamic Model Characterization of a Multirotor Unmanned Aerial Vehicle in Quasi-Steady Flight. Journal of Computational and Nonlinear Dynamics, 2020, 15, .	1.2	3
63	A Nonlinear Strategy to Control Unstable Underactuated Mechanical Systems with Underactuation > 1. Applications to Control Augmentations. Open Automation and Control Systems Journal, 2009, 2, 13-20.	0.9	3
64	On Singular Perturbations of Unstable Underactuated Mechanical Systems With Underactuation Degree ≥ 1 . IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 5998-6003.	0.4	2
65	Relative-pose optimisation for robust and nonlinear control of unmanned aerial manipulators. , 2017, , .		2
66	Command-Filtered Backstepping Redesign for Aerial Manipulators Under Aerodynamic and Operational Disturbances. Advances in Intelligent Systems and Computing, 2018, , 817-828.	0.6	2
67	Timescale separation via Rayleigh quotient in flexible wind turbines: a singularly perturbed approach. Nonlinear Dynamics, 2019, 97, 2723-2738.	5.2	2
68	Design and Manufacture of the Wing Folding Mechanism for a Bioinspired Ornithopter. , 2021, , .		2
69	A Lightweight Beak-Like Sensing System for Grasping Tasks of Flapping Aerial Robots. IEEE Robotics and Automation Letters, 2022, 7, 2313-2320.	5.1	2
70	Constrained stabilization of a cart on an asymmetric-beam system through IDA-PBC. , 2014, , .		1
71	Cooperative Aerial Load Transport with Attitude Stabilization. , 2019, , .		1
72	A decentralized approach for the aerial manipulator trajectory tracking. , 2020, , .		1

#	ARTICLE	IF	CITATIONS
73	Effects of Unsteady Aerodynamics on Gliding Stability of a Bio-Inspired UAV. , 2020, , .		1
74	High-Level Modular Autopilot Solution for Fast Prototyping of Unmanned Aerial Systems. IEEE Access, 2020, 8, 223827-223836.	4.2	1
75	Network Adapter for Sampled Linear Systems Under Asynchronous and Delayed Communications: Quadrotor Remote Speed Control Through Cellular Network. IEEE Transactions on Control Systems Technology, 2022, 30, 1736-1741.	5.2	1
76	Total Energy Shaping Control of Mechanical Systems: Simplifying the Matching Equations Via Coordinate Changes. , 2007, , 147-156.		1
77	Constructive Invariant Manifolds to Stabilize Pendulum-like systems Via Immersion and Invariance. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 4815-4819.	0.4	0
78	Discussion on: "An Immersion and Invariance Algorithm for a Differential Algebraic System". European Journal of Control, 2012, 18, 161.	2.6	0
79	Constructive nonlinear sliding mode surfaces for a class of underactuated systems with parametric uncertainties. , 2009, , .		0